



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Patent Application of

Pål FRENGER et al.

Atty. Ref.: 2380-249

Serial No. 09/643,983

Group: 2133

Filed: August 23, 2000

Examiner: Joseph D. Torres

For: A TWO STAGE DATA PACKET PROCESSING SCHEME

\* \* \* \* \*

December 19, 2005

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY BRIEF**

Sir:

Appellants reply to the new points raised in the Examiner's answer.

Regarding procedural matters, the summary of the claimed subject matter is accurate and not deficient. The Examiner's objections go to his arguments rather than to deficiencies regarding the basic requirements for this section under the rules. Status identifiers are not required for the claims on appeal appendix.

The Examiner makes several provocative statements in the "introduction" section of the Answer on page 5 that Appellants unfortunately must briefly address. For the record, these statements are unsupported, inappropriate, without merit, and untrue. The Examiner did not raise these "112 issues" until now. Any genuine 112 problems should have been raised in the first office action. More importantly, these personal attacks distract from the merits.

Turning to the merits of the Answer, the main point of attack relates the language "the pre-processing does not depend on the current channel condition." Page four of the Answer offers for the first time a dictionary definition for "communications channel." The Examiner suggests that the claimed communications channel includes every transmit and receive component in the transmit chain from the source of the information to the end of the receive chain at the destination of the information. Until now, there has never been a dispute about what "communications channel" meant. Indeed, from the first office action, the Examiner understood perfectly well that the communications channel did not include every transmit/receive component, but instead was the communications medium.

This is certainly the plain and unambiguous meaning ascribed to "communication channel" in the specification. For example, Figure 2 referenced by the Answer clearly identifies the channel as box 7 separate from the transmitter and receiver components. The background section explains in detail the various physical factors that adversely impact a radio communications channel. The specification describes at length that certain parameters depend on the quality of the current radio channel condition. For example, if the current channel condition is poor, then channel coding might be increased and/or a more robust modulation technique might be selected. The Ward patent applied by the Examiner uses the term channel in the same way. For instance, Ward states at col. 5, lines 39-42: the "C/I [carrier to interference] ratio is the measurement generally recognized as being indicative of the voice quality on a given cellular *radio channel*, with higher ratios providing better voice quality."

The terms in a claim are not read in a vacuum and must be interpreted in light of the specification as understood by a person of ordinary skill in the art. The 11<sup>th</sup> hour definition posited now simply tries to distract from the deficiencies in the final rejection. Indeed, this new

definition is contradicted by the specification, the understanding of those ordinarily skilled in the art, the prior art Ward patent, and the Examiner's own plain understanding of the term "communications channel" from the very first office action. A broadest reasonable interpretation still has to be reasonable and read in proper context. The "channel includes everything" interpretation now advanced in the Answer is neither.

The Examiner also now argues for the first time that the word "monitored" must be inserted into the claims. That addition is not necessary because again the claims must be read in context and in light of the specification by one of ordinary skill in this art. If a first processing function, like a modulation type, depends on the current channel condition, then of course the channel condition is monitored by or in some other way known to that processing function so it can perform its function based on that current condition. If a second processing function does not depend on the current channel condition, then it does not matter whether the current channel condition is monitored or detected for that second processing function to perform its function.

Moreover, the Examiner ignores the plain language of the claims. Claim 1, for example, first defines the term "current channel condition" in the step of "*detecting* a current channel condition." Claim 34 recites "*a detector for detecting* a current communication channel condition." Appellants submit that a person of ordinary skill would understand that subsequent references to "current channel condition" refer back to the detected current channel condition, which includes but is not limited to a "monitored" current channel condition. In any event, the Examiner contends that it does not matter which of his interpretations is used. See the sentence bridging pages 4 and 5 and the sentence bridging pages 5 and 6.

The Examiner's arguments now rely, for the first time, on the Examiner's view of operations performed by a voice coder (a LDCELP vocoder) in Ward. Ward shows the speech

coder 21 as a separate block preceding the channel coder 22 which is followed by the modulator 23. The Examiner first contends that "a speech coder must have an analog-to-digital preprocessor as well to digitally code an analog signal into a digitally-coded speech signal, which is then compression coded," pages 6-7 of Answer, and that such A-to-D conversion does not depend on the channel condition. Second, the Examiner now argues that the vocoder carries out its voice compression algorithm "independent of any monitored channel conditions." Page 20 of Answer. Neither argument is persuasive.

The claims do not recite just any type of pre-processing. To the contrary, the independent claims require a specific type of pre-processing on a specific type of information. Claim 1 for example recites: "pre-processing data packets for transmission over the communications channel including performing a first coding operation on those data packets to form pre-processed data packets." Data packets containing binary bits in a predetermined packet format (i.e., header, payload, etc.) are processed—not an analog signal. A first coding operation is performed on those packets which are already in digital form. A-to-D converting is not reasonably interpreted as coding data packets.

Regarding the vocoder, those skilled in the art will understand that vocoding is not performed on data packets, but instead on digitized speech samples. Vocoding is not packet coding. A vocoder produces a stream of compressed digital data rather than pre-processed, coded data packets. The vocoder output must still be packetized. Indeed, Ward's Figures 3 and 3A show the speech coder 21 as a separate block *before* the channel coder 22. The channel coder 22 is where packet processing including packet coding would be performed—not in the speech vocoder 21.

The Examiner's final new argument is relates to Ward's teaching of "continuous monitoring" of channel conditions. The Examiner argues that if "the channel is continuously monitored (see Abstract in Ward), the Examiner fails to see why there is any need in Ward to wait for the current channel condition to be determined." The point is not to split hairs over "how current" is "current." Current does not require instantaneous condition detection to perform the function that depends on what that detected condition is. All practical systems have some amount of delay in terms of detection, processing, etc. The point is that in order for Ward's selection of one of the combination types shown in Table II in column 9 to be useful, that selection must be based in some way on reasonably current detected channel conditions that are known by the entity 28 making the decision.

Ultimately, Ward does not teach distinguishing between a first pre-processing stage that does not depend on detected current channel conditions and a second processing stage that does. All processing stages in Ward are grouped together for each combination type. And each combination type is selected whenever a detected new current channel condition (i.e., C/I) warrants that selection.

The Board should reverse the outstanding anticipation and obviousness rejections for the reasons explained above and in the main Brief. Regarding the obviousness rejections, the Answer repeats the same text used against Ward in an attempt to counter the deficiencies raised in the Brief with respect to the independent claims. But that repeated text does not rebut the non-obviousness arguments in the Brief pointing out the additional deficiencies with the obviousness rejections.

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Respectfully submitted,

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JRL/sd